

ENVIRONMENTAL SCOPING DOCUMENT

PROPOSAL:	Cyclone Mineral Sands Project (Assessment No. 1970)
LOCATION:	Approximately 620 kilometres (km) east of Laverton
LOCALITY:	Shire of Laverton
PROPONENT:	Lost Sands Pty Ltd
LEVEL OF ASSESSMENT:	Public Environmental Review with a 5 week public review period

This Environmental Scoping Document (ESD) is provided to define the requirements of the Public Environmental Review (PER) document to be prepared in accordance with the Western Australian *Environmental Protection Act 1986* (EP Act).

The preliminary key environmental factors to be addressed in the PER document are identified in Section 2. The generic guidelines for the format of an environmental review document are available at the Environmental Protection Authority's (EPA's) website www.epa.wa.gov.au.

The Public Environmental Review document must adequately address all elements of this scoping document prior to approval being given to commence the public review.

1. Introduction

The EP Act sets out that where a proposal is considered likely to have a significant environmental impact it will be subject to an assessment by the EPA under section 38 of the EP Act. This proposal is being assessed by way of a PER because it raises significant environmental factors. The EPA will, at the conclusion of its assessment, prepare a report on the outcome of its assessment of the proposal and give the assessment report to the Minister for Environment. The Minister for Environment will then decide whether or not the proposal may be implemented, and, if the proposal may be implemented, the conditions and procedures that implementation of the proposal should be subject.

The level of assessment for this proposal was set on 25 March 2013. The procedure for this PER assessment is described in the Western Australian EP Act *Environmental Impact Assessment – Administrative Procedures 2012*. The proponent should have regard to the Administrative Procedures when preparing the PER document. The EPA's assessment also has regard to the EPA's Significance Framework described in Environmental Assessment Guideline for Application of a

significance framework in the environmental impact assessment process – Focussing on key environmental factors (EAG 9).

As this proposal is subject to a PER, the proponent is required to produce a PER document in accordance with an approved ESD. The purpose of the ESD is to:

- develop proposal-specific guidelines to direct the proponent on the preliminary key environmental factors for the proposal that are to be addressed in preparing the PER document; and
- set out the work that is required to identify or predict the direct, indirect and cumulative environmental impacts of the proposal and demonstrate, with reasonable confidence, that the EPA's objectives can be met, including proposed mitigation measures based on best available scientific knowledge and sound judgement.

The EPA has determined that it will prepare and issue the ESD outlining the scope and content of the PER document in relation to this proposal.

The EPA, in its formulation of the ESD, undertakes consultation with the proponent regarding the details of the proposal, its environmental setting and the environmental surveys and investigations required and expected outcomes. In addition the EPA will consult with the relevant government agencies, including Decision-Making Authorities. The Office of the EPA (OEPA) provides services and facilities for the EPA. In many cases the OEPA will facilitate the assessment for the EPA.

ESDs prepared by the EPA are not subject to a public review period. The ESD will be available on the EPA website (www.epa.wa.gov.au) upon finalisation and will be included as an appendix in the PER document.

The proponent will be required to prepare a PER document in accordance with the ESD. When the EPA is satisfied that the PER document has adequately addressed all of the preliminary key environmental factors and studies identified in the ESD, the proponent will be required to release the document for a public review period of 5 weeks.

An important aspect of the environmental impact assessment process is the review by the public. The EPA requires the opportunity for public input into the potential environmental impacts of this proposal and its implementation. The EPA expects the proponent to fully consult with the Pila Nguru (Spinifex) People, who are the Traditional Owners and local custodians of the land (Traditional Owners), interested members of the public and relevant stakeholders, and to take due care in ensuring any other environmental matters which may be of interest to the Traditional Owners, public and stakeholders are succinctly addressed. The PER should document the matters raised in consultation, ideally in a table including any changes made to the proposal as a result of consultation and/or the proponent's response to each matter raised.

The EPA considers that adequate consultation can be demonstrated when the Traditional Owners and stakeholders:

- are included in the consultation process and are able to make their concerns known;
- are kept informed about the potential and actual environmental impacts; and
- receive responses to the concerns raised, including identifying how the proposal has been modified and/or identifying management measures that will be implemented to address the concerns raised.

To facilitate adequate public input, the PER document should be made available as widely as possible and at a reasonable cost.

2. Specific Guidelines for the Preparation of the Public Environmental Review Document

2.1 The proposal

The EPA has prepared *Environmental Assessment Guideline for Defining the Key Characteristics of a Proposal* (May 2012) (EAG 1). EAG 1 describes how to define the Key Proposal Characteristics for the purposes of assessing the proposal and subsequent incorporation in the Ministerial approval statement. It is expected that the Key Proposal Characteristics will be informed by the outcome of the work required for the preliminary key environmental factors that are relevant to the proposal specified below (Section 2.2).

The PER should include an options analysis for the placement of infrastructure considering a range of alternative options for ore transport. With respect to the proposed haul road location the PER should explain how the best alignment for the road would be determined, processes for consultation with land managers including the Department of Parks and Wildlife (DPaW) and management actions for impacts associated with construction.

The PER should include a description of all areas of potential disturbance, including borrow pits required for construction of the haul road, including whether borrow material is likely to be sourced from within the Great Victoria Desert Nature reserve

Lost Sands Pty Ltd (the proponent) proposes to develop the Cyclone Mineral Sands Deposit (Cyclone deposit), located within the Eucla Basin of Western Australia, approximately 620 km east of Laverton (Figure 1). The mine has approximately ten years of mine life.

The development of this proposal occurs on mining and exploration leases, within miscellaneous licenses that are yet to be lodged with the Department of Mines and Petroleum (DMP), and also within the Great Victoria Desert Nature Reserve (the Nature Reserve). Additionally, the mine pit is located within Paupiyala Tjarutja Aboriginal Corporation (PTAC) tribal lands, where the Spinifex People are the Traditional Owners and local custodians.

The proposal consists of open cut mine pits and processing infrastructure, including a tailing storage facility, located at the deposit, and an approximately 250 km haul road that travels partially through the Nature Reserve from the deposit site to the Forrest

railway station and siding (Figure 2). It also consists of supporting infrastructure to be located within the proposed miscellaneous licence, including the airstrip, haul road, an accommodation camp, small remote area power station, and access roads. The indicative mine infrastructure layout is shown in Figure 3. .

The proposal will result in the clearing of approximately 1270 hectares (ha) of land containing native vegetation, with part of this clearing for the haul road, being located in the Nature Reserve. Clearing for the borefield and pipeline corridor has not been determined. The summary of the proposal description and preliminary key proposal characteristics are provided in Table 1.

The proposal will involve the extraction of zircon, rutile and other titanium minerals. Mining is proposed to a depth of up to 40 metres (m) below ground level, but will remain above the water table. Ore will be slurried and pumped to a wet concentrator plant, which will include screening and gravity separation to concentrate the heavy minerals. Tailings will be generated from the Wet Concentration Plant as high density slurry and disposed initially into the tailing storage facility. The proposal also includes the disposal of overburden (unmineralised soil and rock material) initially to a designated overburden landform. The initial overburden will be used to construct the tailing storage facility and, as mining progresses, overburden and tailings will be deposited into previously mined-out pit areas.

The proposal will also result in solid and putrescible wastes from the accommodation camp to be disposed to a landfill.

**Table 1 – Key Characteristics Table
Summary of the proposal**

Proposal Title	Cyclone Mineral Sands Deposit
Proponent Name	Lost Sands Pty Ltd
Short Description	<p>The proposal is to develop a mineral sands deposit approximately 620 km east of Laverton and includes:</p> <ul style="list-style-type: none"> • open cut mine pits; • processing infrastructure, including a tailing storage facility; • processing; • backfill of mined pits; • an approximately 250 km haul road from the deposit to Forrest railway station and siding, that runs through the Great Victoria Desert Nature Reserve; • supporting infrastructure, located within a miscellaneous licence yet to be determined, including haul road infrastructure, an accommodation camp, small remote area power station, airstrip and access roads; and • groundwater abstraction.

ENVIRONMENTAL PROTECTION AUTHORITY

	<p>It is also proposed to develop a borefield with supporting infrastructure. The location of this is yet to be determined, although it is expected that water is to be drawn from a deep aquifer within the Murnaroo Formation in the Officer Basin.</p>
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ENVIRONMENTAL PROTECTION AUTHORITY

Physical Elements

Element	Location	Proposed Extent
Open cut mine pits	Figure 3	Clearing of up to 485 ha of native vegetation.
Mining and processing infrastructure	Figure 3	Clearing of up to 135 ha of native vegetation.
Haul road	Figure 3	Clearing of up to 500 ha within a proposed miscellaneous licence area of approximately 1000 ha. Part of this clearing is within the Great Victoria Desert Nature Reserve.
Supporting infrastructure	Figure 3	Clearing of up to 50 ha within a proposed miscellaneous licence area of approximately 200 ha.
Water borefield and supporting infrastructure	Yet to be determined	Disturbance area yet to be determined, proposed miscellaneous licence area of approximately 100 ha.

Operational Elements

Element	Location	Proposed Extent Authorised
Water abstraction	The location of this is yet to be determined, although it is expected that water is to be drawn from a deep aquifer within the Murnaroo Formation in the Officer Basin.	Construction: 4 L/s or 0.1 GL for the total construction phase. Mine operation: Abstraction of up to 250 L/s or 7.9 GL/a.
Power	Yet to be determined	Proposal excluding water sourcing: 8 Megawatt (MW) to be supplied by a small remote area power station. Borefield and pumping stations: upon finalisation of a chosen water source, it is intended that a dedicated generator will supply electricity for the operation of bore pumps and the transfer pumps.
Backfill	Minepits	Disposal of slurry and overburden will be used to backfill previously mined-out pit areas.

2.2 Preliminary Key Environmental Factors and Objectives, and Policy Documents Relevant to this Proposal

The PER document should give a detailed assessment of each of the preliminary key environmental factors identified for this proposal. The EPA has identified the preliminary key environmental factors, objectives and work required as detailed in Table 2.

The EPA has also identified a list of relevant policy documents (see Table 2) which set out how the EPA expects the proponent to consider the preliminary key environmental factors. The EPA expects that the treatment of preliminary key environmental factors will be consistent with the approaches set out in these policy documents. The EPA also considers that the proponent should assess the proposal in a local and regional context and ensure that all cumulative impacts are addressed.

The following are the preliminary key environmental factors relevant to the proposal:

- Flora and vegetation – Clearing of vegetation for mining and infrastructure including the haul road, proposed borefield and associated pipeline;
- Terrestrial Fauna – the potential impact on conservation significant species and, the loss and fragmentation of fauna habitat associated with clearing for mining and infrastructure including the haul, proposed borefield and associated pipeline;
- Subterranean Fauna – the potential impacts of groundwater abstraction from the borefield on stygofauna;
- Heritage – the potential impacts on Aboriginal heritage;
- Hydrological processes – the potential changes to groundwater regimes and groundwater dependent ecosystems associated with groundwater abstraction at the borefield;
- Amenity – noise and dust associated with the transport and storage and loading of product near residences of the Forrest town site and Forrest railway siding.
- Rehabilitation and closure (Integrating factor); and
- Offsets (Integrating factor).

Table 2: Preliminary key environmental factors relevant to the proposal

Flora and Vegetation	
EPA objective	To maintain representation, diversity, viability and ecological function at the species, population and community level.
Potential Impacts	<p>The proposal involves the clearing of up to 1270 ha of native vegetation, including clearing for the mine within the tribal lands of the Spinifex People, clearing for the haul road through the Great Victoria Desert Nature Reserve. The clearing for the borefield and pipeline is yet to be determined.</p> <p>Indirect impacts on flora and vegetation may result from dust deposition, altered fire patterns, spread of weeds, altered water regimes and accelerated erosion/soil loss.</p>

Work required	<p>Detailed description of the clearing associated with the proposal, including from direct and indirect impacts. The description is to include the direct and indirect impacts of clearing for the borefield and pipeline including any impacts of groundwater drawdown on groundwater dependent ecosystems.</p> <p>Figures showing the extent of clearing or loss of vegetation and conservation significant flora species, including but not limited to Threatened and/or Priority Ecological Communities (PEC), Declared Rare Flora (DRF), Priority Flora and new flora species, from direct and indirect impacts.</p> <p>Level 2 flora and vegetation surveys conducted in areas that are likely to be directly or indirectly disturbed as a result of the proposal. Surveys are to be undertaken in accordance with Guidance Statement 51. Follow up targeted or additional Level 2 surveys may be required based on the results of this survey. Previous studies, including but not limited to Woodman 2011 and Woodman 2012, should be gathered and incorporated into the Level 2 flora and vegetation survey report to provide local and regional context.</p> <p>Analysis of the extent of clearing and conservation status of vegetation and/or flora species to be cleared. This includes quantifying impacts to vegetation types and/or conservation significant species, such as Threatened and/or PEC, DRF, Priority Flora and new flora species, to be cleared to assist in the determination of the significance of impacts.</p> <p>Baseline mapping of weed affected areas in any area likely to be directly or indirectly impacted by the proposal.</p> <p>Discussion of proposed management, monitoring and mitigation methods to be implemented.</p> <p>Information regarding whether haul roads are to be sealed or unsealed, and discussion of the direct and indirect impacts, including dust, associated with both options.</p>
Relevant policy/guidance documents	<p>Position Statement 2 Environmental Protection of Native Vegetation in Western Australia.</p> <p>Position Statement 3 Terrestrial Biological Surveys as an Element of Biodiversity Protection.</p> <p>Guidance Statement No. 51 Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia June 2004.</p> <p>Checklist for documents submitted for EIA on marine and terrestrial biodiversity.</p>
Terrestrial Fauna	
EPA objective	<p>To maintain representation, diversity, viability and ecological function at the species, population and assemblage level.</p>
Potential impacts	<p>Clearing of vegetation within the proposal area and clearing for the haul road through the Great Victoria Desert Nature Reserve would result in loss or fragmentation of fauna habitat and consequential displacement of fauna.</p> <p>Death or injury of fauna may occur during clearing and construction and from ongoing operations.</p> <p>Indirect impacts through altered fire regimes, feral animal introduction/increased access for feral animals.</p>
Work required	<p>Desktop study of information available to provide a comprehensive listing of fauna known or likely to occur in the habitat present within the proposal area and proposed haul road, and identification of conservation significant fauna species likely to occur in the proposal area.</p> <p>Reconnaissance survey including mapping of habitats within areas to be cleared and identification of important, rare or unusual habitat types in accordance with Guidance</p>

	<p>Statement 56 and the Technical Guide – Terrestrial Vertebrate Surveys for Environmental Impact Assessment.</p> <p>Conduct targeted Level 2 surveys for conservation significant vertebrate species that are known to or likely to occupy habitats in the project area.</p> <p>Conduct Level 2 fauna surveys in the Great Victoria Desert Nature Reserve in the proposed road alignment in accordance with Table 3 in Guidance 56 and the Technical Guide – Terrestrial Vertebrate Surveys for Environmental Impact Assessment.</p> <p>In accordance with EPA Guidance Statement 20, assess the potential significance of impacts to Short Range Endemic (SRE) invertebrate species. Carry out further survey work, if required, in accordance to EPA Guidance Statement 20.</p> <p>Discussion of potential impacts to Fauna as a result of the proposal and provision of quantitative data on impacts of the proposal to species of conservation significance.</p> <p>Discussion of proposed management, monitoring and mitigation methods to be implemented.</p>
Relevant policy/guidance documents	<p>Guidance Statement No. 56 Terrestrial Fauna Surveys for Environmental Impact Assessment in Western Australia June 2004.</p> <p>Guidance Statement No. 20 Short Range Endemic Invertebrate Fauna.</p> <p>Position Statement 3 Terrestrial Biological Surveys as an Element of Biodiversity Protection.</p> <p>Technical Guide – Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment September 2010.</p> <p>Checklist for documents submitted for EIA on marine and terrestrial biodiversity.</p>
Subterranean Fauna	
EPA objective	To maintain representation, diversity, viability and ecological function at the species, population and assemblage level.
Potential impacts	<p>The potential impacts of groundwater abstraction from the proposed borefield on stygofauna (Murnaroo formation or other proposed areas for abstraction).</p> <p>Potential impacts to troglofauna associated with mining activities.</p>
Work required	<p>Desktop study and description of the potential impacts from water abstraction from a borefield and determination of the likely presence of subterranean fauna (stygofauna) habitat.</p> <p>Surveys of all areas likely to be directly or indirectly impacted by the proposal should be undertaken in accordance with EAG 12 (EPA 2013) and Guidance Statement 54a (EPA 2007).</p> <p>The results of the desktop study will be used to determine whether further survey will be undertaken in accordance with criteria in EPA (2013) and EPA (2007).</p> <p>A description of boreholes sampled will be provided together with maps showing their location indicating bores sampled including those where no specimens were recorded. Mapping should show the extent of known or predicted subterranean fauna habitat and the extent of impact area including drawdown/reinjection contours.</p> <p>Conduct a Level 1 survey according to the criteria in EAG 12 to determine if karst or other suitable geology likely to provide habitat for troglofauna is present in the area proposed to be mined. If habitat suitable for troglofauna is present a Level 2 survey consistent with criteria in EAG 12 should be conducted.</p> <p>There should be a discussion of potential impacts to subterranean fauna as a result of the proposal.</p>

	Discussion of proposed management, monitoring and mitigation methods to be implemented for subterranean fauna.
Relevant policy/guidance documents	<p>EPA (2013) Environmental Assessment Guidelines for Consideration of subterranean fauna in environmental impact assessment in Western Australia. EAG 12. Environmental Protection Authority, Perth.</p> <p>Guidance Statement No. 54a Sampling methods and survey considerations for subterranean fauna in Western Australia July 2007.</p> <p>Checklist for documents submitted for EIA on marine and terrestrial biodiversity.</p>
Heritage	
EPA objective	To ensure that historical and cultural associations are not adversely affected.
Potential impacts	Disturbance to Aboriginal heritage sites and/or cultural associations within the area.
Work required	<p>Undertake a desktop review to identify whether or not an adequate Aboriginal heritage survey has been completed.</p> <p>As noted in Guidance Statement 41, an Aboriginal heritage survey will be required if it is noted from a desktop review that an adequate survey has not been undertaken.</p> <p>It is recommended the Traditional Owners are consulted to understand cultural associations, and document this consultation.</p> <p>Have regard to the Aboriginal Heritage Due Diligence Guidelines which outline matters to be considered, and to assist land users to be more aware of how their activities could adversely impact an Aboriginal site.</p> <p>This proposal involves multiple ground-disturbing activities over a large area, and may require the preparation of an integrated plan to manage Aboriginal heritage. Liaise with the Department of Aboriginal Affairs regarding a need for, and the development of, if required, an integrated plan to manage Aboriginal heritage.</p> <p>Consult with the Department of Aboriginal Affairs regarding the form and content of any proposed investigations and the outcome of any investigations. Discuss and provide information about the extent to which the requirements of the <i>Aboriginal Heritage Act 1972</i> (AH Act) is satisfied and whether any potential impacts on Aboriginal heritage can be regulated and managed.</p> <p>Document the magnitude of the impacts on Aboriginal cultural and heritage matters, and how these impacts will be managed, including under the AH Act, or through other proposed management mechanisms including an integrated management plan as indicated above.</p>
Relevant policy/guidance documents	<p><i>Aboriginal Heritage Act 1972</i>.</p> <p>EPA Guidance Statement 41.</p> <p>Aboriginal Heritage Due Diligence Guidelines (April 2013). Department of Aboriginal Affairs.</p>
Hydrological processes	
EPA objective	To maintain the hydrological regimes of groundwater and surface water so that existing and potential uses, including ecosystem maintenance are protected.
Potential impacts	<p>The abstraction of water from the proposed borefield may result in impacts to groundwater dependent ecosystems and stygofauna.</p> <p>Impacts to existing and potential users as a result of abstraction of water.</p>

Work required	<p>Determine and identify the location of potential water resources available to meet water requirements for the proposal for life of mine. Assess the sustainability of these identified resources for their proposed use and means through which water use can be minimised. Identify the preferred water supply for the proposal.</p> <p>Develop a conceptual model of the groundwater systems, incorporating groundwater quality and the extent of connectivity between aquifer systems.</p> <p>Hydrogeological investigations/modelling and analysis to provide baseline hydrology and predictions of change and impact as a result of abstraction and dewatering.</p> <p>Undertake a hydrological investigation to determine what effect the proposal will have on the groundwater quality and quantity of the area.</p> <p>Assess groundwater drawdown associated with the proposal and analyse and discuss any impacts to groundwater quality and quantity, groundwater dependent ecosystems, and stygofauna, expected as a result of the proposal.</p> <p>Provide a water balance for the mining operations demonstrating that there is sufficient water for the duration of the mining operations.</p> <p>Provide a discussion of potential impacts to surface hydrological processes, with particular regard to northern areas of the Great Victoria Desert Nature Reserve.</p> <p>Provide a description of any emissions and discharges likely to occur from rail sidings and loading facilities associated with the proposal, and demonstrate that appropriate management actions would be implemented in relation to these.</p> <p>Discussion of proposed management, monitoring and mitigation methods to be implemented.</p> <p>Assess any impacts to existing and potential users of the proposed abstraction of groundwater.</p>
Relevant policy/guidance documents	<p>Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC and ARMCANZ, 2000).</p> <p>Government of WA 2004, State Water Quality Management Strategy Document No. 6.</p> <p><i>Rights in Water and Irrigation Act (1914).</i></p> <p>Department of Water 2012 Western Australian Water in Mining Guideline: Draft for Public Comment.</p> <p>Operational Policy no. 512 – Hydrogeological reporting associated with a groundwater well license. (Department of Water)</p>
Amenity	
EPA objective	To ensure that impacts to amenity are reduced as low as reasonably practicable
Potential impacts	Noise and dust associated with the transport and storage and loading of product at the Forrest railway siding has potential to impact residences of the Forrest town site.
Work required	<p>The proposed stockpile storage and loading facilities at the Forrest rail siding are expected to be subject to works approval and licence requirements under Part V of the EP Act.</p> <p>Undertake a noise assessment as specified by the draft EPA Guidance Statement No. 8</p>

	<p>and demonstrate that the noise from the proposal can be managed to comply with the Noise Regulations at residential properties. Identify any new freight handling facilities, such as land-based freight storage and freight Interchanges. These facilities are to be assessed in accordance with State Planning Policy 5.4 Road and Rail Transport Noise and Freight Considerations in Land use Planning, and against the criteria specified in the Noise Regulations. Assess noise impacts associated with the proposed haul road at any sensitive receptors against criteria specified in the Noise Regulations</p> <p>Provide a map showing the locations of all noise sensitive premises affected or likely to be affected by the proposed haul road, transport route, stockpile areas and rail loading facilities.</p> <p>Undertake environmental noise monitoring at representative noise-sensitive premises.</p> <p>Provide noise predictions for noise-sensitive premises in relation to the proposed transport route, stockpile areas and rail loading facilities.</p> <p>Propose noise controls including design and management measures to be put in place when transporting product and loading and unloading at the rail siding.</p> <p>The majority of any airborne particulates from the proposal area are likely to be visible dust, with a potential for some fine particulate matter (PM10 and PM2.5). Visible dust cannot be measured and therefore cannot be modelled and monitored. The proponent is expected to outline the extent to which there is history of existing dust issues at the proposed stockpile storage area and rail siding, and the extent to which buffer distances and proposed management are adequate to manage potential impacts of dust.</p>
<p>Relevant policy/guidance documents</p>	<p>Draft Guidance Statement No. 8 Environmental Noise May 2007.</p> <p>Environmental Protection (Noise) Regulations 1997.</p> <p>State Planning Policy 5.4 Road and Rail Transport Noise and Freight Considerations in Landuse Planning (Western Australian Planning Commission 2009).</p> <p>Implementation Guidelines for State Planning Policy 5.4.</p> <p>Air Quality Modelling Guidance</p>
<p>Rehabilitation and closure (Integrating factor)</p>	
<p>EPA objective</p>	<p>To ensure that a planning process is in place so that the mine can be closed, decommissioned and rehabilitated in an ecologically sustainable manner, consistent with agreed post-mining outcomes and land-uses, and without unacceptable liability to the State.</p>
<p>Potential impacts</p>	<p>Poor rehabilitation and closure procedures, planning and management practices may result in a number of undesirable impacts to the receiving environment, such as:</p> <ul style="list-style-type: none"> • loss of flora and fauna habitat; • unauthorised vegetation disturbance; • depletion of topsoil resources; • compacted soil layers with poor infiltration rates and forming barriers to plant roots; and • the introduction of diseases, such as Phytophthora Dieback, or weeds to rehabilitated areas.
<p>Work required</p>	<p>Desktop study of successful mine rehabilitation procedures under comparable environmental conditions.</p> <p>Identify and propose completion criteria.</p> <p>Prepare a workable, site specific mine closure plan, including information relating to the following:</p> <ul style="list-style-type: none"> • Likely tailings characteristics, including chemical, physical, consolidation rates, drying rates and potential erosion rates;

	<ul style="list-style-type: none"> • Tailings facility construction, including suitability of overburden material relative to tailings characteristics; • Waste Landform construction methods; • Mobilisation of radionuclides/heavy metals and the potential impacts on rehabilitation and closure; and • General assessment on the potential for any form of radiation to impact the environment, including during rehabilitation and closure.
Relevant policy/guidance documents	<p>Guidelines for Preparing Mine Closure Plans June 2011 (Environmental Protection Authority and Department of Mines and Petroleum).</p> <p>Guidance Statement No. 6. Rehabilitation of Terrestrial Ecosystems, June 2006.</p>
Offsets (Integrating factor)	
EPA objective	To counterbalance any significant residual environmental impacts or uncertainty through the application of offsets.
Potential impacts	Potential significant residual impacts on vegetation, flora, fauna species and habitat, and the Great Victoria Desert Nature Reserve.
Work required	<p>Examination of residual impacts and, if required, development of draft program of environmental offsets.</p> <p>Inclusion in the PER of the completed Environmental Offsets Reporting Form and any offsets required and proposed.</p>
Relevant policy/guidance documents	<p>EPA (2006) Position Statement 9: Environmental Offsets.</p> <p>EPA (2008) Environmental Protection Bulletin No 19 – Environmental Offsets – Biodiversity.</p> <p>Govt of WA (2011) WA Environmental Offsets Policy.</p> <p>EPA Offsets Reporting Form.</p> <p>EPA Draft Environmental Assessment Guidelines – Environmental Offsets</p>

These preliminary key factors must be addressed within the environmental review document for the public to consider the impacts of the proposal and proposed management, and make comment to the EPA. All technical reports, modelling and referenced documents (not currently in the public domain) used in the preparation of the PER document should be included as appendices to the document. Documents used in the preparation of the PER must not contain disclaimers that preclude their public availability.

2.3 Factors Not Requiring Further Evaluation in the PER Document

Consistent with the EPA's Significance Framework (EAG 9), the proponent will only be required to carry out any further necessary studies for the preliminary key environmental factors identified in the ESD.

The following are the environmental factors likely to be affected by the proposal that are not significant or can be regulated and managed to meet the EPA's objectives. These environmental factors were identified at the time the EPA made its decision to assess the proposal and/or are based on information provided by decision-making

authorities during consultation about the ESD. These environmental factors will not be evaluated in the PER document.

- Landforms;
- Terrestrial environmental quality;
- Inland waters environmental quality;
- Air quality; and
- Human health.

If during the course of the preparation of the PER document other potential environmental matters or environmental factors are identified, the OEPA should be consulted to determine whether they are to be addressed in the PER document.

3. Parallel Processing of Other Approvals

It is the EPA's expectation that other approvals are progressed in parallel with the EPA's assessment noting that the constraint applied by the EP Act to decision making only relates to making the final decision. Proponents are encouraged to pursue other approvals requirements for their projects in parallel with the EPA's assessment. The parallel processing approach will support the capacity of DMAs to provide input into the other phases of the EIA process and support timely whole of government approvals for projects.

Other approvals required for the proposal include:

- Water Licensing and other approvals required by the Department of Water;
- Works Approvals and Licenses required from the Department of Environmental Regulation; and
- Mining Proposal and Mine Closure Plans required by the Department of Mines and Petroleum.

4. Agreed Assessment Milestones

EPA Environmental Assessment Guideline No. 6 "Timelines for EIA of Proposals" addresses the responsibilities of proponents and the EPA for achieving timely and effective assessment of proposals.

This timeline (Table 3) is agreed between the EPA and proponent. Proponents are expected to meet the agreed proposal assessment timeline, and in doing so, provide adequate, quality information to inform the assessment. Proponents will need to allocate sufficient time to undertake the necessary studies to the appropriate standard and incorporate the outcomes of the studies into the PER document

Where an agreed milestone is not being met by the proponent, or if adequate information is not submitted by the proponent, the timeline for subsequent steps will be re-established. Where the OEPA is unable to meet a date in the agreed milestones the proponent will be advised as soon as possible.

The EPA will report to the Minister for Environment on whether the agreed proposal assessment timeline has been met. Where the timeline has not been met, the reasons for this will be identified.

Table 3: Agreed milestones for the proposal

Key Stage of Proposal	Agreed Milestone
EPA approval of ESD Document	19 August 2013
Proponent submits first adequate draft of PER Document	31 August 2013
OEPA provides comment on first draft PER Document	6 weeks 12 October 2013
Proponent submits adequate revised draft PER Document	4 weeks 9 November 2013
EPA authorises release of PER Document	2 weeks 23 November 2014
Proponent releases approved PER Document	1 Week 30 November 2014
Public Review of PER Document	5 weeks + 2 weeks for Christmas 11 January 2014
EPA provides Summary of Submissions	3 Weeks 1 March 2014
Proponent provides Response to Public Submissions	4-6 Weeks 5 April 2014
OEPA assesses proposal for consideration by EPA	7 weeks 24 May 2014
Preparation and finalisation of EPA Report (including 2 weeks consultation on draft conditions with proponent and key Government agencies)	5 weeks 28 June 2014

5. Decision - Making Authorities

At this preliminary stage, the EPA has identified the following decision making authorities (DMAs) (see Table 4). These DMAs are constrained from making any decision that could have the effect of causing or allowing the revised proposal to be implemented. Throughout the assessment process further DMAs may be identified.

Table 4: Nominated Decision - Making Authorities

Decision Making Authority	Relevant Legislation
Department of Environment and Conservation	Part V of the <i>Environmental Protection Act 1986</i> <i>Wildlife Conservation Act</i>
Minister for Water	<i>Rights in Water and Irrigation Act 1914</i>
Minister for Mines and Petroleum	<i>Mining Act 1978</i>
Minister for Indigenous Affairs	<i>Aboriginal Heritage Act 1972</i>

DMAs are not prevented from parallel processing, up to the point of their decision, so that their views can inform the ministerial consultation process.

6. Preparation of the Environmental Review Document

The recommended format for the Environmental Review document is enclosed as Attachment 1.

When the EPA is satisfied with the standard of the environmental review document (see EAG 6 Section 4.3) it will provide a written sign-off, giving approval to advertise the document for public review. The review document may not be advertised for release before written approval is received.

The proponent is responsible for advertising the release and availability of the PER document in accordance with the guidelines which will be issued to the proponent by the OEPA. The EPA must be consulted on the timing and details for advertising the document.

Figure 1 – Proposal Location



Figure 2 – Proposal Surroundings

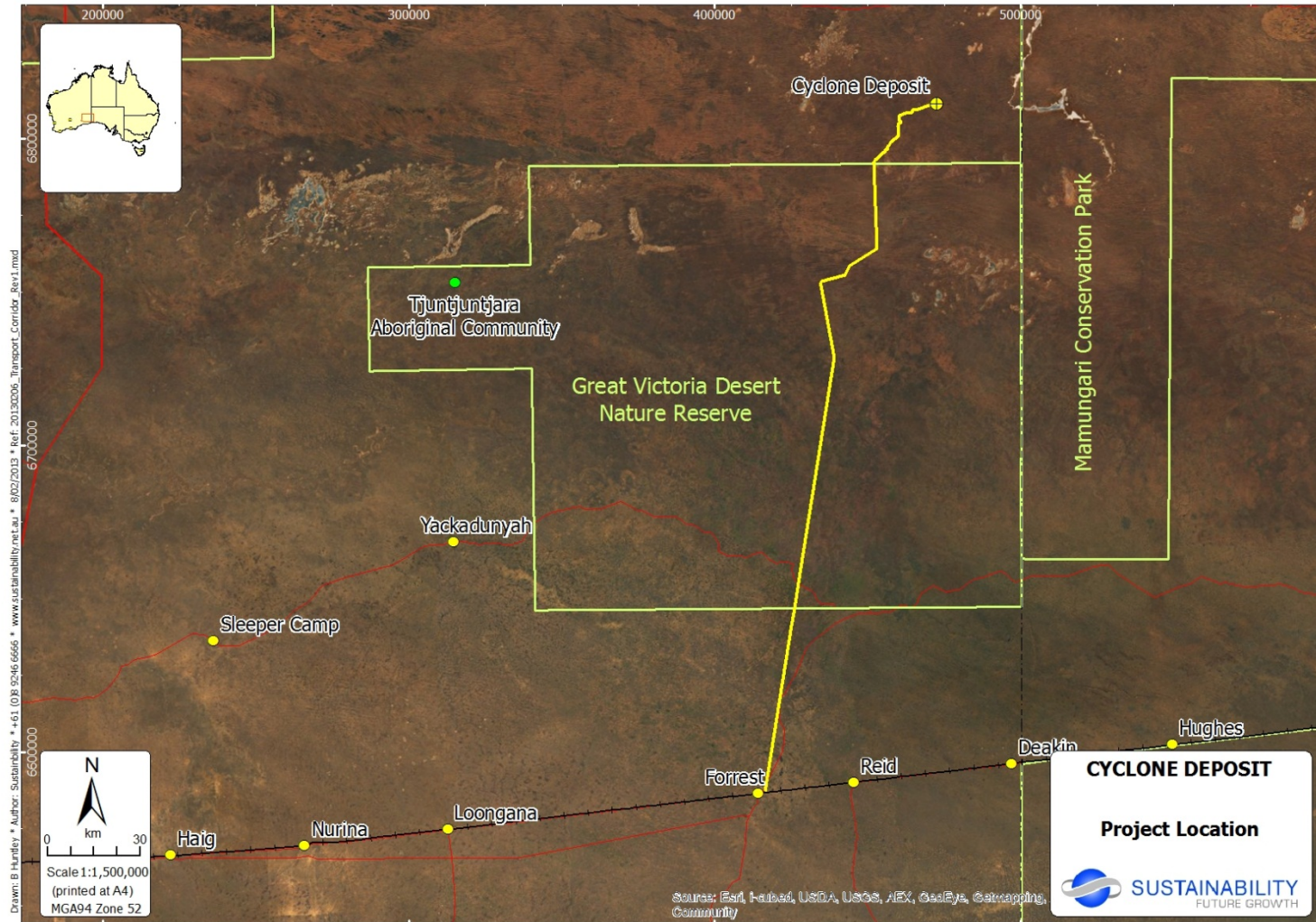


Figure 3 – Indicative Proposal Layout

